



Missouri Environmental Public Health Tracking (EPHT) Network Metadata Record

Air Quality Data

Description
<p>Citation</p> <p>Titles: Percent of Days PM_{2.5} Over NAAQS_Monitor and Modeled, Percent of Days PM_{2.5} Over NAAQS_Monitor Only, Annual percentage of Population Living in Counties Exceeding the NAAQS, Annual Average Ambient Concentrations of PM_{2.5} (Seasonal and Daily)_Monitor and Modeled, Annual Average Ambient Concentrations of PM_{2.5} (Seasonal and Daily)_Monitor Only, Number of Days with Maximum 8-hour Average_Ozone_Monitor and Modeled, Number of Days with Maximum 8-hour Average_Ozone_Monitor Only, Number of Person Days with Maximum 8-hour_Ozone_Monitor and Modeled, Number of Person Days with Maximum 8-hour_Ozone_Monitor Only, Number of Person Days with PM_{2.5} Over NAAQS_Monitor and Modeled, and Number of Person Days with PM_{2.5} Over NAAQS_Monitor Only</p> <p>Originators: Missouri EPHT Program</p> <p>Publication date: 06/01/2011</p>
Description
<p>Abstract: These datasets include counts, percentages, and averages regarding air quality data for Ozone and Particulate Matter (PM). More information regarding the creation of this indicator can be found in the <i>Missouri EPHT Data and Statistical Guide</i> available at http://www.health.mo.gov/living/environment/epht/index.php.</p> <p>Purpose: These datasets are required by the Centers for Disease Control and Prevention for submission to the EPHT Network.</p> <p>Supplemental information: These datasets were made available to state EPHT portals by the Centers for Disease Control and Prevention (CDC) in conjunction with the United States Environmental Protection Agency (EPA). EPA provided the expertise necessary to model the air data for use by the national and state EPHT portals.</p>
Point of Contact
<p>Person: Missouri EPHT Program Manager</p> <p>Organization: Missouri Department of Health and Senior Services Division of Community and Public Health Section for Environmental Public Health Bureau of Environmental Epidemiology</p>

Phone: 573-751-6102

Fax: 573-751-6041

Telecommunications Device or Teletypewriter (TDD/TTY) phone: 800-669-8819

Email: EPHTN@health.mo.gov

Address type: Mailing

Address: PO Box 570

City: Jefferson City

State or Province: MO

Postal code: 65102-0570

County: Cole County

Address type: Physical

Address: 930 Wildwood Drive

City: Jefferson City

State or Province: MO

Postal code: 65109

County: Cole County

Data Type

Native dataset environment: These files were created using Microsoft Excel and Adobe Pro Extended 9.

Time Period of Data

Beginning date: 01/01/2001

Ending date: 12/31/2009

Currentness reference: Time Period End Date

Status

Data status: Complete

Update frequency: None

Key Words

Theme:

Keywords: air, air quality, NAAQS, Clean Air Act, national standard, respiratory, model, monitor, ozone, particulate matter, PM, ambient, concentration, seasonal, daily, readings, 029, Missouri, MO

Keyword thesaurus: None

Place: Location

Keywords: 029, Missouri, MO

Keyword thesaurus: FIPS 5-2 (State)

Data Access Constraints

Access constraints: Public access

Use constraints:

How should this dataset be used?

Use of this data is restricted for statistical reporting and analysis only.

How should this dataset not be used?

Do not attempt to learn the identity of any person included in the data. Do not disclose or make use of the identity of any person or establishment discovered inadvertently and report the discovery to:

Missouri EPHT Program Manager
Bureau of Environmental Epidemiology
P.O. Box 570
Jefferson City, MO 65102-0570
Phone: 573-751-6102
Email: EPHTN@health.mo.gov

Can it be linked to other datasets?

Do not combine this data with other data for the purpose of matching records to identify individuals. Do not disclose or make use of the identity of any person or establishment discovered inadvertently and report the discovery to:

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Bureau of Environmental Epidemiology
P.O. Box 570
Jefferson City, MO 65102-0570
Phone: 573-751-6102
Email: EPHTN@health.mo.gov

Can these data be used for commercial purposes?

No.

Can these data be used to form a basis for additional health studies or some remediation actions?

N/A

What are the constraints for data interpretation?

Do not imply or state, either in written or oral form, that interpretations based on the data are those of the original data sources, the Missouri State Government, the Missouri Department of Health and Senior Services, or the Centers for Disease Control and Prevention unless the data user and data sources are formally collaborating and have received written permission to do so. Acknowledge, in all reports or presentations based on these data, the original source of the data, the Missouri Department of Health and Senior Services, the Centers for Disease Control and Prevention, and the United States Environmental Protection Agency.

Data Security Information

Security classification system: Public

Security classification: Unrestricted

Security handling: No security measures have been specified for this dataset.

Spatial Reference Information

Spatial Domain

Bounding Coordinates

In Unprojected coordinates (geographic)

Boundary	Coordinate
West	-95.77469999999996 (latitude)
East	-89.098842000000005 (latitude)
North	40.613639999999997 (longitude)
South	35.995479000000003 (longitude)

Data Structure and Attribute Information

Overview

Entity and attribute overview: Under the Clean Air Act, EPA establishes primary air quality standards to protect public health, including the health of "sensitive" populations such as people with asthma, children, and older adults. EPA also sets secondary standards to protect public welfare. This includes protecting ecosystems, including plants and animals, from harm, as well as protecting against decreased visibility and damage to crops, vegetation, and buildings. To get more information regarding national air quality standards, visit <http://www.epa.gov/air/criteria.html>.

EPA has set national air quality standards for six common air pollutants (also called the criteria pollutants):

- carbon monoxide (CO)
- ozone (O₃),
- lead (Pb)
- nitrogen dioxide (NO₂)
- particulate matter (PM)
- sulfur dioxide (SO₂)

Some of these pollutants (CO, SO₂, and lead) are emitted directly from a variety of sources. Although some industrial sources release ozone directly into the environment, most ground-level ozone forms in the air from chemical reactions involving nitrogen oxides (NO_x), volatile organic compounds (VOCs), and sunlight. NO₂ is formed in the air through the oxidation of nitric oxide (NO). PM, also known as particle pollution, can be directly emitted, or it can be formed when emissions of NO_x, sulfur oxides (SO_x), ammonia, organic compounds, and other gases react in the atmosphere. Particle pollution is regulated as PM_{2.5}, or "fine particles" with diameters less than or equal to 2.5 micrometers, and PM₁₀, which includes all particles with diameters less than or equal to 10

micrometers.

Each year EPA looks at the levels of these pollutants in the air and the emissions from various sources to see how both have changed over time and to summarize the current status of air quality

Entity and attribute detailed citation: Specific citation information is available from the U.S. EPA on the Internet at <http://www.epa.gov/air/index.html>.

Data Quality and Accuracy Information

General

Logical consistency report: The Clean Air Act, which was last amended in 1990, requires EPA to set National Ambient Air Quality Standards (40 CFR part 50) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for six principal pollutants, which are called "criteria" pollutants. They are listed below. Units of measure for the standards are parts per million (ppm) by volume, parts per billion (ppb - 1 part in 1,000,000,000) by volume, milligrams per cubic meter of air (mg/m³), and micrograms per cubic meter of air (µg/m³).

National Ambient Air Quality Standards

Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide	9 ppm (10 mg/m ³)	8-hour ^[1]	None	
	35 ppm (40 mg/m ³)	1-hour ^[1]		
Lead	0.15 µg/m ³ ^[2]	Rolling 3-Month Average	Same as Primary	
Nitrogen Dioxide	53 ppb ^[3]	Annual (Arithmetic Average)	Same as Primary	
	100 ppb	1-hour ^[4]	None	
Particulate Matter (PM ₁₀)	150 µg/m ³	24-hour ^[5]	Same as Primary	
Particulate Matter (PM _{2.5})	15.0 µg/m ³	Annual ^[6] (Arithmetic Average)	Same as Primary	
	35 µg/m ³	24-hour ^[7]	Same as Primary	
Ozone	0.075 ppm (2008 std)	8-hour ^[8]	Same as Primary	
	0.08 ppm (1997 std)	8-hour ^[9]	Same as Primary	

		0.12 ppm	1-hour (10)	Same as Primary	
Sulfur Dioxide		0.03 ppm	Annual (Arithmetic Average)	0.5 ppm	3-hour (1)
		0.14 ppm	24-hour (1)		
		75 ppb (11)	1-hour	None	

⁽¹⁾ Not to be exceeded more than once per year.

⁽²⁾ Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

⁽³⁾ The official level of the annual NO₂ standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard

⁽⁴⁾ To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb (effective January 22, 2010).

⁽⁵⁾ Not to be exceeded more than once per year on average over 3 years.

⁽⁶⁾ To attain this standard, the 3-year average of the weighted annual mean PM_{2.5} concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m³.

⁽⁷⁾ To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m³ (effective December 17, 2006).

⁽⁸⁾ To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. (effective May 27, 2008)

⁽⁹⁾ (a) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.

(b) The 1997 standard—and the implementation rules for that standard—will remain in place for implementation purposes as EPA undertakes rulemaking to address the transition from the 1997 ozone standard to the 2008 ozone standard.

(c) EPA is in the process of reconsidering these standards (set in March 2008).

⁽¹⁰⁾ (a) EPA revoked the [1-hour ozone standard](#) in all areas, although some areas have continuing obligations under that standard ("anti-backsliding").

(b) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is ≤ 1.

⁽¹¹⁾ (a) Final rule signed June 2, 2010. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.

Completeness report: Data completeness for each air monitor was based on the availability of samples for a certain number of days during each calendar quarter. Data are only provided for counties with monitors that pass the completeness criterion.

For additional information concerning the technical documentation, contact the Office of Air and Radiation Communications Office within the U.S. EPA at 1200 Pennsylvania Avenue, NW, Washington, DC 20760 or by telephone at 866-411-4EPA (toll-free from anywhere in the United States).

Data Source and Process Information

Process Steps

Process step information

Process Step 1

Process description: Datasets previously provided to state grantees by the CDC in

conjunction with the U.S. EPA, accessed and downloaded to local machine.
Process date: 06/01/2011

Process Step 2

Process description: Microsoft Excel files created.

Process date: 06/01/2011

Process Step 3

Process description: Indicators calculated per the indicator guidance and Missouri Department of Health and Senior Services policy. (More information on the indicator guidance and data policies can be found in the *Missouri EPHT Data and Statistical Guide* available at <http://www.health.mo.gov/living/environment/epht/index.php>.)

Process date: 06/01/2011

Process Step 4

Process description: Missouri Metadata record created for the dataset using the Missouri EPHT Metadata Record format then converted to .pdf. The creation of a Missouri Metadata record is completed to assist users by offering the record in a format compatible with electronic reading devices and smart phones.

Process date: 06/01/2011

Data Distribution Information

General

Resource description: PDF file

Distribution liability: These data were provided by the Missouri Department of Health and Senior Services; the findings and conclusions based on these data are the sole responsibility of the author(s) of the study.

Although every effort has been made to ensure the accuracy of the material contained in this dataset and the Missouri EPHT Network Portal, complete accuracy cannot be guaranteed. The Missouri Department of Health and Senior Services is not responsible for any errors or misprints contained herein and cannot accept any responsibility whatsoever for loss or damage occasioned or claimed to have been occasioned, in part or in full, as a consequence of any person acting, or refraining from acting, as a result of a matter contained within the Missouri EPHT Network Portal.

Distribution Point of Contact

Person: Missouri EPHT Program Manager

Organization: Missouri Department of Health and Senior Services
Division of Community and Public Health
Section for Environmental Public Health
Bureau of Environmental Epidemiology

Phone: 573-751-6102

Fax: 573-751-6041

Telecommunications Device or Teletypewriter (TDD/TTY) phone: 800-669-8819

Email: EPHTN@health.mo.gov

Address type: Mailing

Address: PO Box 570

City: Jefferson City

State or Province: MO

Postal code: 65102-0570

County: Cole County

Address type: Physical

Address: 930 Wildwood Drive

City: Jefferson City

State or Province: MO

Postal code: 65109

County: Cole County

Custom Order Process

Custom order process: Custom selected data from this data source/set is available from the United States EPA at:

- Office of Air and Radiation Communications Office
US EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20760
- 866-411-4EPA (toll-free from anywhere in the United States)
This is the EPA Technical Support Center, a general computer system telephone help line, staffed by an EPA contractor. Please state that you are calling about the OAR Web site.
- OAR_Comments@epa.gov

More information on obtaining a custom created Missouri specific health record dataset is available at <http://www.health.mo.gov/data/policies.php>

Metadata Reference
Metadata Date
Last updated: 06/01/2011
Metadata Point of Contact
<p> Person: Missouri EPHT Program Manager Organization: Missouri Department of Health and Senior Services Division of Community and Public Health Section for Environmental Public Health Bureau of Environmental Epidemiology Phone: 573-751-6102 Fax: 573-751-6041 Telecommunications Device or Teletypewriter (TDD/TTY) phone: 800-669-8819 Email: EPHTN@health.mo.gov </p> <p> Address type: Mailing Address: PO Box 570 City: Jefferson City State or Province: MO Postal code: 65102-0570 County: Cole County </p> <p> Address type: Physical Address: 930 Wildwood Drive City: Jefferson City State or Province: MO Postal code: 65109 County: Cole County </p>
Metadata Access Constraints
Access constraints: None Use constraints: None
Metadata Standards
Standard name: FGDC Content Standard for Geospatial Metadata